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Update

Weapon Injury ~~Data~~

Notes from the Weapon-Related Injury Surveillance System January 1998

Gunshot Wounds Decline for Massachusetts Residents

Gunshot wounds (GSWs) to Massachusetts residents have dropped for the third year in a row according to reports filed by hospital emergency departments with the Massachusetts Department of Public Health (MDPH). Most notably, violent gun assaults have declined dramatically.

Hospitals reported 666 gunshot wounds to MDPH in 1996, compared with 828 in 1995 and 980 in 1994. Figure 1 shows that the majority of these injuries (74%) resulted from firearms, which include handguns, shotguns, and rifles. However, 26% were attributed to nonpowder guns (such as BB guns), which use compressed air or gas or a mechanical spring action to propel ammunition. Airguns were associated most often with accidental injuries (Figure 2), although 11% of violent GSWs resulted from airguns. Children between the ages of 12 and 17 were at highest risk for airgun injuries in 1996, accounting for 53% of such injuries.

Figure 1. Percentage of Firearm vs. Nonpowder GSW Cases Treated in Mass. Emergency Departments, 1996

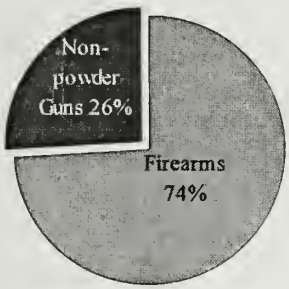
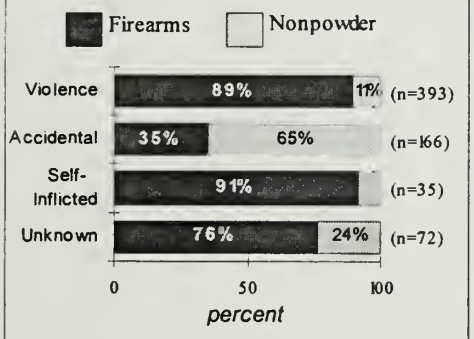


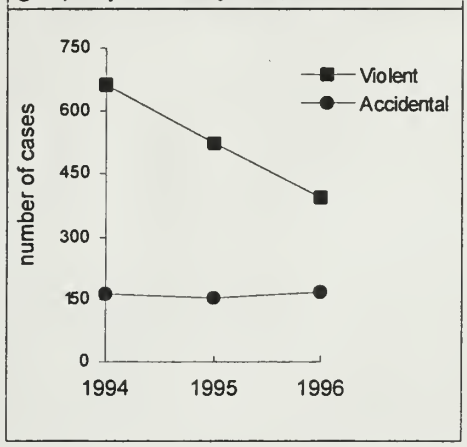
Figure 2. Firearm vs. Nonpowder GSW Cases Treated in Mass. Emergency Departments by Intent of Injury, 1996



Violence-related Gunshot Wounds

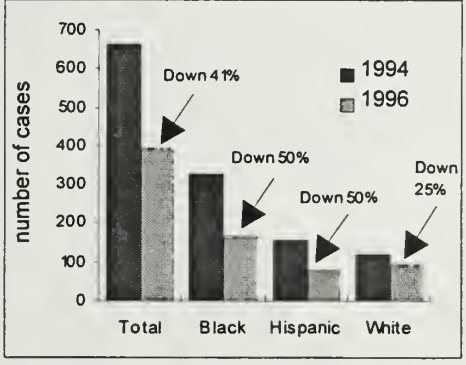
Among violent shootings, 393 cases were reported for 1996 compared with 526 in 1995 and 662 in 1994 (Figure 3). This represents an overall decline of 41%. Comparatively, accidental gun injuries remained stable over the three-year period.

Figure 3. Number of Violent and Accidental GSW Cases Treated in Mass. Emergency Departments by Year, 1994-1996



Black and Hispanic residents experienced the largest declines. Gunshot wounds were down 50% for blacks and for Hispanics, compared with 25% for white, nonHispanics (Figure 4). Among teenaged males, GSWs decreased most among black youths (56%), a notable development because this group has been at highest risk for gun assaults.

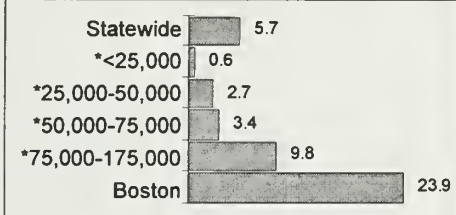
Figure 4. Number of Violent GSW Cases Treated in Mass. Emergency Departments by Race, 1994 and 1996



The decline in GSWs has occurred almost exclusively in the ten cities with the highest weapon injury rates in 1994. Between 1994 and 1996, gunshot wounds in Springfield declined by 61%, New Bedford 59%, Boston 47%, and Worcester 43%.

Rates have varied considerably by size of patient's city of residence. Figure 5 shows that in 1996, smaller cities (fewer than 25,000 residents) averaged less than 1 violent GSW per 100,000 residents; for Boston, the rate was 24 per 100,000.

Figure 5. Violent GSW Rates by Size of Patient's City (per 100,000 residents), 1996



*Rate is averaged for all cities this size combined.

1997 data are still preliminary, but initial data for the first six months (January-June) indicate a continuation of the downward trend in violent firearm injuries.

Method Notes

Project investigators assess reporting levels statewide by reviewing a sample of hospital emergency department records annually. Hospitals have consistently reported over 80% of gunshot wound cases from 1994 to 1996. Rates presented in this bulletin have not been adjusted for hospital underreporting. Rates for figure 5 were calculated using 1995 population data estimates developed by the Massachusetts Institute for Social and Economic Research.

Gunshot injuries not treated in an emergency department (i.e., pre-hospital deaths) are not captured by this system.

Massachusetts Department of Public Health, Weapon-Related Injury Surveillance System, 250 Washington St., Boston, MA 02108, (617) 624-5600

WRISS Survives Funding Uncertainty

Since 1990, the Weapon-Related Injury Surveillance System (WRISS), a project developed by the Massachusetts Department of Public Health with funding provided by the Centers for Disease Control and Prevention (CDC), has been tracking gunshot and stabbing incidents to Massachusetts residents.

Limited to three emergency departments initially, the system quickly expanded and by November 1993 all 85 acute care hospital emergency departments were reporting. Statewide data has been analyzed and disseminated since 1994 to injury prevention professionals throughout the Commonwealth.

CDC funding for WRISS officially ended on September 30, 1997, with the close of the current operating grant.

Recognized as a national model and a valuable indicator of weapon trends in Massachusetts, WRISS received considerable attention from legislators, Department staff, and advocates of weapon-related surveillance regarding the continuation of the project.

Thanks to Governor Paul Cellucci and the Massachusetts Department of Public Health's commitment to fund the project, hospitals continued to report cases without interruption during this transition. Project staff continue to analyze and disseminate weapon injury data.

For additional weapon data, contact the Weapon-Related Injury Surveillance System (WRISS) at (617) 624-5600.

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